

**Elateridae from New Guinea and New Britain in the Collections
of the H. S. P. A. Experiment Station**

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(Presented at the meeting of December 12, 1929)

A considerable number of beetles of the family Elateridae, collected by Dr. Fred Muir, Mr. C. E. Pemberton and others, in New Guinea and New Britain, have accumulated in the collections of the Experiment Station of the Hawaiian Sugar Planters' Association. Of the some hundred species of this family previously known from that general region, twenty-eight are represented in these collections. In this paper there are added to the known Elaterid fauna of the New Guinea-New Britain region six new species and one new genus. All the types are deposited in the type collection of the Hawaiian Entomological Society in Honolulu, T. H.

The well-recognized affinities between the insect fauna of New Guinea and that of Australia are shown, among the click-beetles, by the preponderance in the New Guinea lists of species of *Adelocera* (Lacordaire), *Alaus* and *Monocrepidius*, all of which are well represented on the southern continent. New Britain has attracted fewer collectors, and its Elaterid fauna is less well known than that of New Guinea. The rather meagre evidence contained in this paper suggests that it is not very different from the New Guinea fauna.

AGRYPNUS Eschscholtz

1829, Thon. Arch., vol. 2, pt. 1, p. 32.

Type—*Elater tomentosus* Fabr.

1. *A. aequalis* Candèze. (1857, Mon. des Elat., vol. 1, p. 25).

Six specimens from the Sharp collection collected by Pratt, without further locality than New Guinea. All these have the tips of the elytra slightly emarginate, a variable character.

2. *A. resectus* Candèze. (Idem, p. 45).

Two specimens: one taken by Pemberton in August, 1928 at Port Moresby, New Guinea; the other, a male in the Sharp col-

lection, has the aedeagus dissected out and mounted on a card. This aedeagus is described and figured in Sharp and Muir's paper on the male genitalia of Coleoptera under the name of *Agrypnus* sp. (Trans. Ent. Soc. London, 1912, p. 545, pl. lxvi, fig. 154).

3. *A. soricinus* Candeze. (1881, *Elat. nouv.*, fasc. 3, p. 1).

A single specimen collected by Pemberton near Rabaul, New Britain, March-May 1929. Originally described from western New Guinea.

ADELOCERA Latreille.

1829, Cuvier's *Regne Anim.*, vol. 4, p. 451.

Type—*Elater ovalis* Germar.

4. *A. asperulata* (Candeze). (1878, *Ann. Mus. Genova*, vol. 12, p. 103).

Four specimens collected by Pemberton at Koitaki, New Guinea, 1500 feet, October-December 1928.

5. *A. cinerascens* (Candeze). (Idem, p. 103).

One specimen from Koitaki, 1500 feet, October-December 1928; Pemberton, coll.

6. *A. gracilenta* (Schwarz). (1902, *Deut. Ent. Zeit.*, p. 106).

Twenty-six specimens, mostly from Koitaki, 1500 feet, October-December 1928; a few from the Rigo district and from Port Moresby, New Guinea, and four from near Rabaul, New Britain, February 1929; all collected by Pemberton.

7. *A. gracilis* (Candeze). (1874, *Revis. de Mon. des Elat.*, p. 83).

Upwards of fifty specimens collected by Pratt, and by Pemberton at Port Moresby, Kikori, Koitaki (1500 feet), middle Fly River, and Rigo district, New Guinea; and near Rabaul, New Britain.

8. *A. insularis* (Candeze). (Idem, p. 74).

A single specimen, slightly larger than called for by Candeze's description; from Koitaki, 1500 feet, October-December 1928, Pemberton, coll. This small species occurs not only in New Guinea, but also throughout the Malay Archipelago from Malacca eastward to the Moluccas.

9. *A. limosa* (Candeze). (1881, *Elat. nouv.*, fasc. 3, p. 10).

Ten specimens collected by Pemberton at Koitaki and in the Rigo district, New Guinea, October-December 1928. Four other specimens: three from near Rabaul, New Britain, and one from Port Moresby, collected by Pemberton, I identify as *limosa* with some doubt. They may be *setulosa* (Schwarz), but although they are somewhat rubbed, the rather erect hairs on the posterior lateral regions of the elytra hardly can be termed bristles.

10. *A. pupilla* (Candeze). (1892, *Ann. Mus. Genova*, ser. 2, vol. 12, p. 802).

One specimen collected by Pemberton at Koitaki, 1500 feet, October-November 1928. This species differs from *gracilis* in having the carina of the posterior angle of the pronotum short, instead of prolonged almost to the anterior border.

11. *A. rectangula* (Schwarz). (1903, *Deut. Ent. Zeit.*, p. 378).

Six specimens collected by Pemberton at Koitaki, October-December 1928.

12. *A. robusta* (Schwarz). (*Idem*, p. 377).

One specimen taken by Pemberton at Koitaki.

13. *A. scopa* (Schwarz). (1902, *Stett. Ent. Zeit.*, p. 200).

Four specimens, Koitaki, 1500 feet, October-January; Pemberton, coll.

14. *A. subsericea* (Candeze). (1878, *Ann. Mus. Genova*, vol. 12, p. 102).

One specimen collected by Muir at Laloki, New Guinea, in 1909.

AL AUS Eschscholtz.

1829, *Thon. Arch.*, vol. 2, pt. 1, p. 32.

Type—*Elater oculus* Fabr.

15. *A. cerastes* Candeze. (1865, *Elat. nouv.*, fasc. 1, p. 16).

A single specimen in the Sharp collection, taken by Pratt, and labelled New Guinea.

16. *A. infumatus* Candeze. (1874, *Revis. de Mon. des Elat.*, p. 144).

One specimen taken at Laloki, New Guinea, by Muir in 1910.

17. *A. obliquus* Candeze. (Idem, p. 143).

A single badly rubbed specimen in the Sharp collection, New Guinea, Pratt, coll.

18. *A. scops* Candeze. (Idem, p. 137).

One specimen taken by Pemberton at Koitaki, 1500 feet, November-December 1928.

CAMPSOSTERNUS Latreille.

1834, Ann. Soc. ent. France, vol. 3, p. 141.

Type—*Elater fulgens* Fabr.

19. *C. papuensis* n. sp. (Pl. VI, fig. 1).

Broad; glabrous; very shiny throughout. Dark coppery green, with outline and posterior angles of pronotum, as well as scutellum and anterior part of elytral suture, blue-green. Purplish bronze tint over most of pronotum, and near base and along sides of elytra. Front strongly, triangularly, impressed. Antennae bluish black with first joint blue-green.

Pronotum broader than long (even along median lines); convex; coarsely margined; depressed along lateral margins and at posterior angles with two vague impressions on either side on rear of disc. Punctuation extremely fine and sparse everywhere except antero-laterally. Trapezoidal, sides nearly straight, though faintly sinuate, from (and including) the posterior angles to the anterior third, thence roundly narrowed to anterior angles. Posterior angles broad and short, not carinate; divergent and straight-sided except for incurved tips. Scutellum transverse; faintly biimpressed.

Elytra as wide as posterior angles of pronotum; shoulders prominent; lateral margins nearly straight to middle; elytra somewhat concave behind the humeri. Interstriae toward the base suggested by vague longitudinal elevations; their punctuation very fine and of the same size as those representing the striae. Apices divergent, spinous.

Underside of body bluish green; legs bluish green except for tarsi which are blackish with fulvous pubescence.

30 mm. long; 10.5 mm. wide.

Holotype male (?) (genitalia missing). From Sharp collection, taken by Pratt in New Guinea.

So far as I know this is the first record of this genus from the region east of Java, Borneo and the Philippines. There is, of course, the possibility that the specimen is mislabelled, and that I have failed to recognize an already described species.

PSEUDOTETRALOBUS Schwarz.

1902, Stett. Ent. Zeit., p. 210.

Type—*P. dohrni* Schwarz.

20. *P. dohrni* Schwarz. (1902, Stett. Ent. Zeit., vol. 63, p. 211).

One specimen from New Guinea in the Sharp collection; Pratt, coll.

PROPSEPHUS Hyslop.

1921, Proc. U. S. N. M., vol. 58, no. 2353, p. 666.

Type—*Psephus beniniensis* Candeze.

21. *P. chatanayi* (Fleutiaux). (1917, Bull. Soc. ent. France, p. 231).

One specimen taken by Pemberton at Koitaki, 1500 feet, October-November 1928, and another in the Sharp collection taken by Pratt, New Guinea.

22. *P. papuensis* (Candeze). (1881, Elat. nouv., fasc. 3, p. 35).

Six specimens collected by Pemberton at Koitaki, 1500 feet, October-December 1928.

SIMODACTYLUS Candeze.

1859, Mon. des Elat., vol. 2, p. 169.

Type—*Aeolus cinnamomeus* Boisduval.

23. *S. pembertoni* n. sp.

Slender, rather shiny; pubescence yellowish-brown. Color castaneous, with middle of front darker; pronotum with three blackish vittae, roughly parallel to posterior third where the lateral ones incurve; anterior margin of elytra, the scutellum, and the tip of each elytron, fuscous to black. Front gently convex, coarsely and closely punctate. Antennae short; 3rd joint a little longer than the 4th.

Pronotum distinctly longer than wide, parallel on posterior half (except for the outcurved posterior angles), narrowed anteriorly from about the middle. Posterior angles long, acute, strongly bicarinate, the outer carina the longer. Punctuation even, close and rather fine. Medianly sulcate almost to the anterior margin. Scutellum elongate, tumid.

Elytra about as wide as posterior angles of pronotum; sides parallel to beyond middle, thence narrowed to apex. Elytra transversely convex, striae consisting of light linear punctures; intervals nearly flat posteriorly. Elytra diverging from sutural line at the apex, and each strongly emarginate at the tip, the outer angle of the emargination longer than the inner.

Body beneath blackish in general, with an irregular lateral castaneous

band along prothorax and abdomen. Legs castaneous, with tibiae and (in part) femora, blackish. Tip of last abdominal sternite concavely emarginate.

Female 11 mm. long.

Type, near Rabaul, New Britain, March-April 1929, Pemberton, coll.

24. *S. similis* (Candeze). (1878, Ann. Mus. Genova, vol. 12, p. 111).

Five specimens collected by Pemberton near Rabaul, New Britain, March-May 1929. Originally described from Misori Island off the northwest coast of New Guinea.

HORIZOTEICHOS gen. nov.

Type—*H. papuensis* n. sp.

Elongate; head medium, directed forward and downward; front gently convex, its anterior margin broadly rounded. Labrum of ordinary form. Mandibles bifid; labial palpi with last joint triangular.

Antennae short, the joints, from the 3rd on, about as wide as long; 11th broadly rounded.

Prothorax transversely convex; posterior angles long, carinate.

Elytra transversely convex; apex widely emarginate.

Prosternal lobe medium; propectus nearly horizontal; prosternal sutures double, nearly straight, closed.

Margins of mesosternal cavity divergent, horizontal.

Posterior coxal plates rather abruptly widened inwardly, but without a toothlike extension on their posterior margin.

Tarsi slender, 1st joint rather shorter than the four following together; 4th joint plainly but briefly dilated; 3rd slightly dilated.

This genus falls within the subfamily Pachyderinae. The tarsal lobe is less developed than in *Glypheus* Candeze, and the front is gently convex and very finely punctate.

25. *H. papuensis* n. sp. (Pl. VI, fig. 2).

Yellowish brown, with head, median pronotal vitta, tips of posterior angles, scutellum, sutural vitta and apical fifth of elytra, black. Front gently convex; finely and sparsely punctate. Pubescence fine, semi-erect and yellowish everywhere but on the head, pronotal vitta, scutellum and apical black area, where it is black. Pronotum shiny, slightly more rufous than elytra. Antennae short, barely exceeding posterior angles of pronotum in the male; 2nd joint small; 3rd about as long as the 4th, triangular; from 4th on, subquadrate, about as wide as long; 11th broadly rounded at tip.

Prothorax longer than wide; sides straight and narrowing gently to apical fifth, thence more strongly narrowed to apical angles. Posterior angles straight, diverging slightly from the line of the sides of the prothorax; bicarinate. Pronotum very finely punctate, even on the sides; deeply sulcate posteriorly along vitta. Scutellum longer than wide; sub-ogival; somewhat tumid on its middle.

Elytra striato-punctate; intervals flat, very finely punctate. Apex widely emarginate, the inner and outer angles more or less equal.

Body beneath, black, except for propleurae, which are flavous, and the anterior lobe, which is dark yellowish brown. Legs with rufous cast. Lobe of 4th tarsal joint very small but distinct.

Male, 9.0 mm. long; female 9.5 mm. long.

Holotype male and allotype female, Koitaki, New Guinea, 1500 feet, October-November 1928, Pemberton, coll.

MONOCREPIDIUS Eschscholtz.

1829, Thon. Arch., vol. 2, pt. 1, p. 32.

Type—*M. pallipes* Eschsch.

26. *M. arouensis* Candeze. (1878, Ann. Mus. Genova, vol. 12, p. 112).

Two specimens collected by Pemberton within a 25-mile radius of Port Moresby, New Guinea, June 1928. Originally described from the Arou Islands, lying to the southwest of New Guinea.

27. *M. contiguus* Candeze. (Idem, p. 114).

Three specimens collected by Pemberton at Koitaki, October-November, and in the middle Fly River country, New Guinea, "250-300 miles up," July 1928.

MEGAPENTHES Kiesenwetter.

1858, Nat. Ins. Deut., vol. 4, p. 353.

Type—*Elater lugens* Redt.

28. *M. brunniventris* Candeze. (1892, Ann. Mus. Genova, ser. 2, vol. 12, p. 804).

One specimen collected by Pemberton within a 25-mile radius of Port Moresby, New Guinea, June 1928.

MELANOXANTHUS Eschscholtz.

1833, Dejean, Cat., ed. 3, p. 91.

Type—*Elater melanocephalus* Fabr.

29. *M. exiguus* n. sp. (Pl. VI, fig. 3).

Piceous, with anterior margin (especially toward the sides), posterior angles and base of prothorax, yellow-brown; elytra chestnut, yellow-brown at base. Pubescence thick, semi-erect, brownish. Antennae chestnut; short, not attaining the posterior angles of the pronotum. Front flat, slightly tumid above; coarsely and closely punctate; anterior margin broad, slightly recurved along the middle.

Pronotum convex, slightly flattened on disc; cribrate punctate; base sulcate; longer than wide; sides slightly sinuate on basal third, thence straight and gently convergent to anterior fifth, thence rounded to anterior angles. Posterior angles slightly divergent; broad; strongly unicarinate; tips rounded, not acute. Scutellum flat, granulate, fairly robust.

Elytra distinctly narrower than pronotum; narrowed from the humeri to beyond middle, thence more strongly to the apex; apex rounded; punctate-striate; intervals flat, granulate toward base.

Castaneous beneath, with legs flavous.

4.5 mm. long.

Holotype, Koitaki, New Guinea, 1500 feet, October-November 1928, Pemberton, coll.

Close to description of *flavangulus* Candeze (1865), but the pubescence is not griseous, and the elytra, even at the shoulders, are markedly narrower than the posterior angles of the prothorax.

30. *M. glyphonides* n. sp. (Pl. V, figs. 4, 4 a).

Black except for pale yellowish posterior angles of prothorax and flavous maculations on the following areas of the elytra: (1) on either side of scutellar fovea, (2) on the anterior third a suboval spot obliquely truncate anteriorly and occupying interstriae 3-6, and (3) on the posterior third of the elytra another roundish area occupying interstriae 3-9. Pubescence very fine, black except on flavous areas, where it is yellowish.

Front strongly convex; its anterior margin in the middle curved downward over the clypeus, and margined laterally by the sides of the deep parantennal foveae. This clypeal area tumid and clypsedra. Antennae short, not attaining posterior angles of the prothorax; joints progressively shorter from the 4th on, joints 2 and 3 small, subequal; 1 to 3 rufous, the rest black.

Pronotum convex, longer than wide; sides converging and straight from the tips of the posterior angles to anterior fourth, thence roundly narrowed to the anterior margin. Closely, evenly and broadly punctate. Strongly sulcate medianly at base. Posterior angles strongly unicarinate, the carinae blackish. Scutellum elongate, pointed behind, declivous.

Elytra rather coarsely punctate-striate; interstriae rugose on basal half. Apex briefly subtruncate.

Black beneath, with exception of prosternum and legs, which are rufous. Legs and claws simple.

3.5 mm. long.

Holotype female (?). Koitaki, New Guinea, 1500 feet, November-December 1928, Pemberton, coll.

The structure of the frontal margin suggests *Glyphonyx*, but besides other separating characters, the claws are simple, not pectinate.

ANCHASTUS LeConte.

1853, Trans. Amer. Philos. Soc., vol. 10, p. 459.

Type—*A. digitatus* LeConte.

31. *A. nitidulus* Candeze. (1878, Ann. Mus. Genova, vol. 12, p. 119).

One specimen collected by Pemberton at Koitaki, November-December 1928.

CARDIOPHORUS Eschscholtz.

1829, Thon. Arch., vol. 2, pt. 1, p. 34.

Type—*Elater ruficollis* L.

32. *C. albipubens* n. sp.

Head and thorax black, shiny; elytra dark reddish brown with shoulders and vague area on distal third, lighter brown; pubescence rather long, whitish. Front broadly concave in middle; finely and closely punctate. Antennae blackish brown with 1st joint rufous; 3rd joint a little shorter than the 4th. Pronotum convex; broader than long; finely, closely and unevenly punctate. Sides evenly rounded with greatest width across the middle; briefly but distinctly sulcate at base. Posterior angles directed straight backwards; carination short. Sulci well marked. Lateral sutural line fine and very brief.

Elytra broader than pronotum; strongly striate; intervals finely punctate, convex, not costate posteriorly. Underside blackish; legs rufous; claws dentate.

5.5 mm. long.

Holotype male, Port Moresby, New Guinea, August 1928, Pemberton, coll.

The lateral lobes of the aedeagus differ from those of *papuensis* in being not clavate toward the apex.

33. *C. papuensis* Candeze. (1878, Ann. Mus. Genova, vol. 12, p. 132).

Nine specimens collected by Pemberton in the Rigo and Port Moresby districts of New Guinea in August 1928.

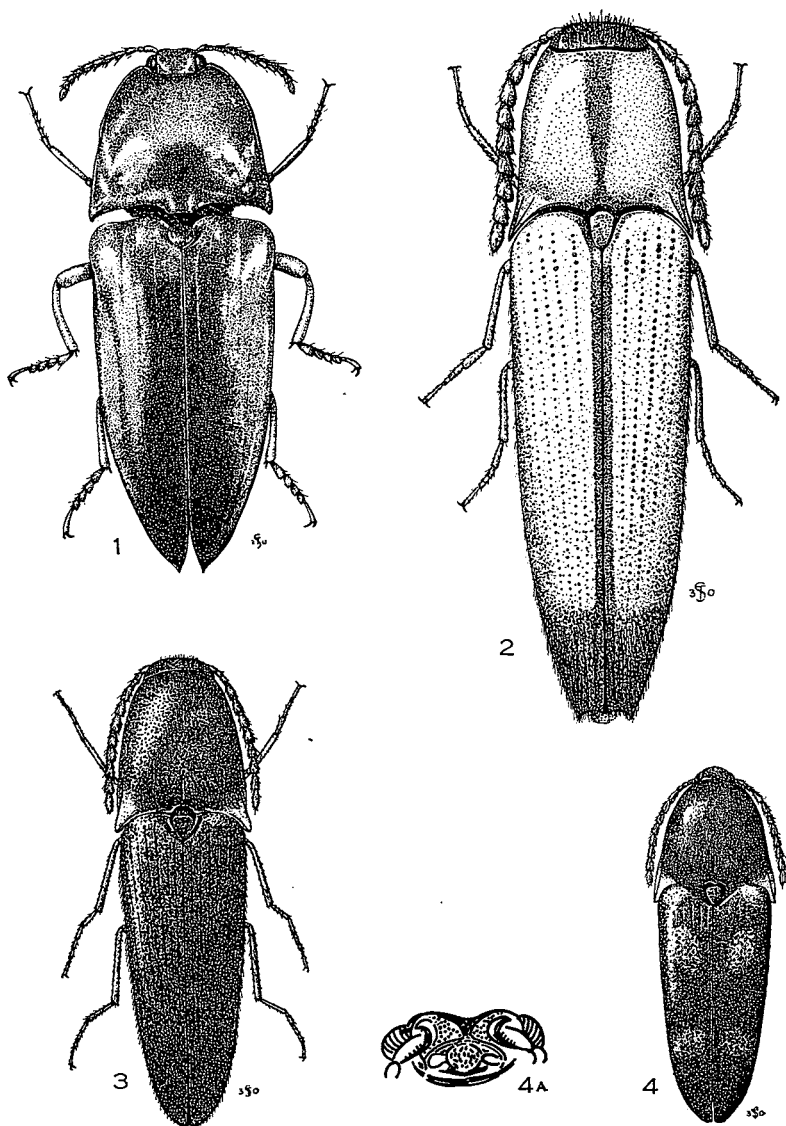
MELANOTUS (Megerle) Eschscholtz.

1829, Thon. Arch., vol. 2, pt. 1, p. 32.

Type—*Elater fusciceps* Gyll.

34. *M. albertisi* Candeze. (1878, Ann. Mus. Genova, vol. 12, p. 135).

Four specimens, Koitaki, New Guinea, 1500 feet, October-December 1928, Pemberton, coll.



NEW ELATERIDAE FROM NEW GUINEA.

Fig. 1. *Campsosternus papuensis* (X 2.3).

Fig. 2. *Horizoteichos papuensis* (X 10.3).

Fig. 3. *Melanoxanthus exiguus* (X 13.7).

Fig. 4. *Melanoxanthus glyphonides* (X 13.4).

Fig. 4a. *M. glyphonides*, view of fronto-clypeal region.